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From the Editor

Psychiatric disorders range from mood shifts to depression to schizophrenia to psychosis. Two per cent of the world's population suffer from psychiatric disorders. In the advanced nations and among the affluent people, consciousness about psychiatric conditions is high whereas in poorer nations like ours it is a social stigma and as a result patients are not cared for appropriately.

So much so that psychiatric conditions are not recognized as diseases and disorders. Psychiatric specialists and psychologists are therefore low in number in our country.

In general, psychiatric illness exists when these conventional bounds of normality of inner experience or of behaviour are exceeded, and when definite inconvenience is thereby caused, or seems likely to be caused, to either the person concerned or to those around him.

For example, inner experiences such as fear before a possible car smash, or apprehension before a dental appointment, are common and accepted as normal. Fear and apprehension without a conventionally acceptable cause or with a cause too trifling for the intensity of feeling, may prompt the sufferer to seek medical advice.

For example, to be suspicious of strange men is at times a wise precaution for females. To be suspicious of all men all the time is excessive but the inconvenience may be balanced by the pleasure of feeling such a centre of attraction. However, if public accusations follow that all the men around her have designs on her virtue, then the neighbours of such a lady are likely to

press her to seek medical advice.

The study and treatment of all such personally or socially inconvenient forms of experience or behaviour is termed psychiatry. Stress of modern life, addictions drugs and other non-drug substances, mental handicaps due to genetic reasons, are all part of the psychiatric disorder scenario.

The Stethoscope has chosen this week's Cover Story on Psychiatric illness to focus on the causes, treatment, care, and preventive measures needed to combat these socially and medically significant disorders and to take help of the innovative remedies and resources within the country and in the advanced nations.

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The Causes of Psychiatric Illness

Illness is generally the result of a number of different factors operating together rather than of a single cause. For example, an illness such as pneumonia may be regarded as an infection of the lungs by bacteria, but mere contact with such organisms does not necessarily lead to pneumonia. A person's inherited susceptibility to chest infection, his own acquired resistance to the bacteria and his general state of bodily health may all influence the result. In addition, his body's reaction to the infection may modify the severity of the illness.

Similarly, the causes of a psychiatric illness may include an immediate precipitating cause, emotional or physical, an inherited liability to emotional disorder, and the susceptibility which a person may develop in his own lifetime. The nature of the illness will depend on all these factors and also on the individual personality.

Inherited Influences

These are transmitted through certain structures in the germ cells of the mother and father. They are independent of the parents' influence on the developing child. The inherited characteristics may be tendencies to develop particular illnesses or a general greater-than-average liability to emotional disorder. In very few conditions is the inherited factor the chief cause, and types of psychiatric illness in which all blood-relatives are affected are very rare. Unaffected persons from an affected family may sometimes transmit the tendency to their children.

The majority of psychiatric illnesses occur without any pronounced inherited contribution and most children born of psychiatrically ill parents do not inherit the condition.

Influence of Personality and Psychological Development

Everyone knows that members of any given family may have similar personalities and temperaments, and that in some families there is a common tendency to be 'highly strung'. This can be partly accounted for by truly

inherited traits, as above. But perhaps even more important is the influence which members of the family have on each other's development. The effects on developing personality of family relationships and, later, of wider social contacts, have been described.

Varying Responses. Different people respond to the same situation in different ways. They show tendencies to react quickly or slowly, aggressively or submissively, in a hostile or friendly manner, suspiciously or trustingly according to their inherited qualities and the ways in which they have learned from their experience. Most people will respond at different times in each of these and many other ways. Often the personality and the way it has developed will decide the nature of the response as much as the person or incident arousing it. Often a person's responses will be consistent in that he will react similarly to a particular type of situation as it recurs. For example, he may show particular respect or particular rebelliousness in the face of authority. He may show undue aggressiveness or undue submissiveness when he feels uncertain of himself.

Recurring Difficulties. Everyone meets situations which for him are peculiarly difficult to deal with. Often he will not be fully aware of the nature of the difficulty and, in that case, the difficulty will tend to recur with unpleasant emotional accompaniments, the source of which is unrecognised. If this experience is severe or prolonged or leads to difficulty in managing his life, he will be said to be suffering from an emotional disorder. He will be aware of repeated and apparently unfounded feelings of anxiety, fear, guilt or depression. Such difficulties may begin in early life, and persist unrecognised and unsolved only to be encountered once more in later years when the individual concerned is under stress.

Immediate Emotional Causes

It is widely recognised in medicine that emotional stress may lead to illnesses, physical or emotional. Overwork and disturbed sleep are often blamed, probably too often. Prolonged and severe worries, shocks, bereavements and disappointments often contribute, as may debilitating physical illnesses.

It is not always recognised that the term 'emotional stress' includes periods of high excitement or agitation caused by desired events, too. Such activities as a change of school, moving house, weddings, or promotion at work often include a sense of loss or anxiety intermixed with that of pleasure.

As described above, certain persons are likely to face the same difficulties in a given set of circumstances over and over again. When these circumstances arise they stir up the unpleasant emotions associated with them. In consequence they may be dealt with unrealistically or unconstructively with the result that the original difficulty may be prolonged and intensified. This then is a type of 'cause' arising in the environment which operates more because of the individual's personal difficulty in his emotional life than because of any difficulties inherent in the situation. Since no situation difficult in itself is apparent, it may seem to the person concerned, or to the observer, that there is no reason for the emotional discomfort experienced. His reactions to the situation may thus appear inexplicable and irrational.

Physical Factors

Psychiatric disturbances occur as an occasional accompaniment to physical illness. Delirium consequent on high fever or poisoning is a well-known example. It is usually a short-lived disturbance and clears up when the physical condition improves. Physical illnesses which affect the brain, such as injury or encephalitis (inflammation of the brain as a result of infection), are particularly prone to disturb its function. In most cases there is no permanent damage and recovery takes place.

Injury, Old Age, Tumours. Sometimes damage to the brain occurs as a result of various diseases or injury, and may lead to long-lasting or permanent psychiatric abnormality. In old age the brain, in common with other parts of the body, wears out and the structure of the nervous tissue deteriorates. Failing memory, diminished power of thought and, later, confusion about places and people and time usually ensue gradually.

When severe this deterioration is referred to as dementia. Similar mental deterioration may occur as a result of other sorts of brain damage, e.g. that due to diseases of the blood vessels, to tumours, or occasionally following serious head injuries. A rare group of illnesses occurs where dementia takes place early they are therefore called presenile dementias. In some of these disorders heredity plays an important part.

Chemical Disorders. Disorders of function of the chemical and hormonal processes of the body may result in psychiatric disorder. Certain rare types of psychiatric illness have been shown to be due to such chemical abnormality and it is likely that other illnesses, whose cause is at present unknown, are due in part to comparable disorders.

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The Types of Psychiatric Illness

The Psychoneuroses

Anxiety and the Anxiety State

Some forms of psychological defences were described. These serve to prevent various mental conflicts from resulting in the unpleasant state of tension technically termed 'anxiety'.

'Anxiety' covers all degrees of fear from mild apprehension to uncontrolled panic. Its sources are, frequently, unconscious. Paradoxically, this is still true even in the so-called phobias, which will be discussed below under the heading of Anxiety Hysteria.

Causes. Most people have experienced anxiety in some degree, though not everyone is equally prone to it. It is not known for certain why this is so. Genetic factors may have a bearing, and it seems fairly well established that certain events in childhood play a significant part. It is possible that these two factors are complementary. Whatever its more distant origins, anxiety is often precipitated by some form of current stress. In some cases, the stress will be

self-evident, as in loss of one's home through fire or flood, serious physical illness, financial catastrophe, difficulties in marriage, threatened or actual loss of employment and indeed in all circumstances where the individual feels threatened or insecure. In other cases the stress will be less obvious, and the significance of unconscious factors altogether greater.

Clinical Features. Anxiety may be acute (may begin suddenly) or chronic (prolonged). It may also start gradually. Often it is very short-lived, though it can and does recur. It may produce certain secondary effects, although these are not pronounced in the milder forms. Restlessness is an example, and varies considerably. The same is true of impaired concentration and disturbed sleep.

Physical changes, when they occur, are temporary and reversible. Thus, the pulse rate may rise and is sometimes experienced as palpitations. The blood pressure may increase. Occasionally, there is a tendency to diarrhoea or to the frequent passing of urine. Other bodily changes are often present, but clinically they are not of any great importance.

Treatment. Short-lived anxiety, unless severe, rarely calls for treatment. But longstanding anxiety often brings a patient to his doctor. The doctor may prescribe a sedative or a tranquilliser, or may discuss with the patient whatever difficulties may seem to underlie the condition. Sometimes he may refer the patient to a specialist for more detailed psychotherapy.

Simple uncomplicated anxiety of any considerable duration, however, is not often seen by the psychiatrist. It is almost always complicated by further symptoms, usually of an hysterical or obsessional kind.

Hysteria

There are two main clinical kinds of hysteria: anxiety hysteria, in which the patient develops phobias; and conversion hysteria, in which the patient develops bodily symptoms. In addition, there are certain striking disturbances of consciousness which are more difficult to classify. They are described under the heading of 'dissociation hysteria'.

Anxiety Hysteria

In this condition the anxiety relates to an external situation, object or person. But unlike the anxiety present in the face of a very real danger, the fear in anxiety hysteria seems irrational. Thus there may be fear of open spaces, streets, lifts, tube-trains, water, spiders, or children, to name only a few examples. Such irrational fears are termed 'phobias'.

The apparently irrational nature of these fears springs from the fact that the sources of the anxiety remain unconscious, while the fear is displaced from the original object or objects on to a relatively harmless substitute. But the choice of object or situation is itself significant since it represents, in a symbolic form, the original dangerous object or person.

Causes. A man afraid of a crowded tubetrain may be unable to face his fear of a tangled domestic situation from which he can see no escape. A modest girl of strict upbringing may be unable to allow herself to recognise the

temptations which strangers represent for her, and thus be confined to her home by an apparently irrational fear of streets. These are simplified examples; as a rule, the determinants of the phobia are rather more complicated.

A dangerous internal impulse is sometimes symbolised by a phobia. A man who is afraid of knives may, in this way, be expressing his alarm at his own destructive feelings.

But whatever the phobia symbolically represents, its success as a defence rests in the opportunity it gives the patient to avoid the apparently threatening situation and so maintain some peace of mind. But the price the patient pays may be heavy. For while a patient with a fear of tube-trains may manage perfectly well as long as he travels by bus, a patient with a severe street phobia may be seriously incapacitated.

Conversion Hysteria

Just as in anxiety hysteria inadmissible unconscious factors are symbolised by a phobia, so, in conversion hysteria, they are symbolised by bodily symptoms. The anxiety is now said to be 'converted', that is, its sources are represented by the bodily change. Usually, this form of hysteria is a more successful defence against anxiety than the phobia; indeed, in some cases of conversion obvious anxiety may be entirely absent.

Clinical Features. The forms which conversion may take are as limitless as the varieties of phobia. Very striking disabilities such as blindness, deafness or paralysis are less common than they were fifty years ago, but they still occur from time to time. On the other hand, hysterical loss of voice, muscle weakness, pains of all kinds, headaches and disturbances of sensation such as numbness still occur with the greatest frequency. An inevitable result of this is that some patients are referred to general hospitals for specialist medical and surgical advice, where investigations fail to reveal a physical basis for the disorder.

It used to be thought that hysteria of this kind occurred almost entirely in women. This idea originated from the notion of the ancient Greeks that the symptoms of hysteria were due to a wandering of the womb or 'hysteros'. Nowadays it is recognised that hysteria is common in men.

Symbolic Paralysis. A hypothetical example may help to demonstrate some of the symbolism to be found in conversion hysteria.

An attractive young woman whose mother had recently died had to cope unaided with a tyrannical and bedridden father. Her sense of duty allows her no protest in spite of an intense longing for a young man whom she often meets during the course of her daily shopping. One morning she wakes to find both legs paralysed. The unconscious conflict between desire and hostility has been converted into a bodily symptom which has three immediate results. First, she can no longer meet the young man she admires. Secondly, she can no longer care for her father since she is now unable to climb the stairs. Thirdly, her sexual conflict is symbolised by the paralysis.

This case is oversimplified, but it may serve to illustrate not only the process

of symbolisation but also the gain from the illness which results from the production of symptoms. This so-called 'secondary gain' explains why conversion hysteria is not always easy to cure.

Dissociation Hysteria

This group of conditions is closely allied to conversion hysteria. The main difference is that, in dissociation, the disturbance is one of consciousness while in conversion the disturbance is bodily.

To this category belong certain 'dream states', somnambulism or sleep-walking, massive loss of memory, wandering from one town to another with no recollection (fugues) of the journey, and the very rare cases of 'multiple personality'. In these remarkable, rare cases a man may live part of his life in an apparently ordered way, without any knowledge on his part that he lives the rest of his life in an entirely different way, perhaps in a different place and under a different name. In fiction the best-known example is Stevenson's 'Dr. Jekyll and Mr. Hyde', but there are a number of startling though authentic cases on record.

In all forms of dissociation a whole area of the patient's mental life which he does not wish to recognise is excluded from consciousness.

The Hysterical Personality

A large number of people, who cannot necessarily be regarded as psychiatrically ill and who may never develop hysterical symptoms, show certain personality traits which together constitute what is known as the 'hysterical personality'.

These people are often said to be emotionally shallow, able to form impulsive and fickle relationships but rarely ones of a lasting or deeply felt kind. They are often sexually capricious or frigid. They are said to be fond of the limelight and tend to dramatise their actions and relationships. Where these traits are sufficiently pronounced to interfere seriously with the patient's life, treatment may be called for.

The Obsessional Neurosis

Unlike hysteria, the major disturbance in obsessional neurosis is of thought, word or deed, so that the patient feels compelled repeatedly to think certain thoughts or perform certain actions. In each case the symptom is determined by unconscious factors, and often seems perverse, alien or absurd to the conscious mind.

The obsessional symptom is characteristically recurrent, occurs against the patient's conscious wishes, and cannot be dismissed by an act of will. These features distinguish the obsession from all other forms of pre-occupation.

Obsessional Thoughts. There are countless varieties of obsessional thoughts. There may be disturbing ruminations of killing a loved one, or of spreading infection or poisoning people. Such thoughts occasion a great deal of guilt. Elaborate defences may be involved in a constant fight to prevent any such thought from being translated into action. But sometimes the thoughts

concerned seem trivial or even meaningless. In such cases the trivial thoughts may sometimes occupy the patient more and more until, occasionally, more important thoughts are virtually excluded. In some cases the thoughts take the form of unwanted philosophical speculations, such as 'Why am I?' or 'What is God?' Sometimes thoughts appear in flagrant contradiction of the patient's conscious attitudes. A religious man, for example, may feel plagued by blasphemous ideas, and a woman who prides herself on her purity may find herself preoccupied with obscene thoughts.

Sometimes the thoughts refer to recent actions. The patient may find himself constantly wondering whether or not he has turned off a gas tap, locked a door or switched off a light, even when he knows perfectly well that he has done so. In other cases the thought of doing some definite and purposeful act may be followed immediately by the thought of doing its opposite. Such a condition may be characterised by extreme indecision.

Obsessional Speech. Some people are obsessed by words rather than by thoughts. A man may find himself compelled to mutter an obscene, trivial or frightening word, and then feel very embarrassed in case he has been overheard. More rarely, he may shout. As with all obsessions, a conscious fight against these activities results in anxiety which may be very considerable.

Compulsive Actions. When we consider compulsive actions, we find them equally varied. The patient may feel compelled to remember every single event of the day and to record it in a diary, even when he feels the task overwhelmingly beyond him and stays up half the night in a vain endeavour to complete his notes. Or he may find himself compelled to write on lavatory walls, to his continued astonishment, guilt and disapproval. Sometimes he has to touch a series of objects, often in a carefully organised manner and order. Such activities may become so involved and elaborate that his life is seriously dislocated by them.

Although such compulsive actions may remain isolated they are often built up into complicated rituals. A woman may have to dress in a certain order, have everything 'just so', and may take several hours to get the seam of her nylons straight.

Guilt is a striking feature of obsessional neurosis. It explains the constant need to eliminate objectionable thoughts, to check and recheck whether or not one has done any damage. Ambivalence-in this case the coexistence of destructive and reparative tendencies-is more pronounced in this disturbance than in any other neurosis.

Many defences are employed by the obsessional subject to allay his anxiety. A return is often made to earlier levels of development when magical devices, such as crossing one's fingers, touching wood, walking round ladders and stepping between cracks on the pavement, were used for supposed self-protection (as in young children). Another defence is displacement. In obsessional neuroses, the fight against unconscious forces takes the most devious routes.

The Obsessional Personality

As with the hysterical personality, the obsessional personality shows a number of traits which are shared by many people who cannot be considered psychiatrically ill, unless these traits are so pronounced that everyday life is seriously interfered with.

They can be considered 'careful' or 'mean' according to taste and according to the general regard in which they are held. They are punctual and set great store by time. They are sticklers for exact usage of words, custom and social order. They demand a great deal of themselves and set high standards for others. They tend to take strict moral attitudes to the point of being puritanical. They are active, hard-working and scrupulous. They are often excessively tidy and clean. They are the natural enemies of dirt, untidiness and disorder. But faced with a choice between two similar attitudes, or courses of action, they may become utterly indecisive and uncontrollably anxious. Such a situation will, of course, call for treatment.

Mixed Neuroses

Often the conditions described under the headings of 'hysteria' and 'obsessional neurosis', as well as those conditions predominantly characterised by anxiety, are not present in pure form but show features of different types of neurosis. Anxiety with some conversion symptoms, and phobias occurring in obsessional states are common examples of 'mixed' neuroses.

Neurotic Depression

It is doubtful if the term 'neurotic depression' can be regarded as a diagnosis in its own right. Depression, a subjective feeling of sadness and misery, occurs in its milder forms in normal people but in the neuroses the depression may be of considerable duration and intensity.

Depression can occur in any of the neuroses so far described. It is closely related to feelings of guilt, though the guilt is by no means always conscious. It is often present in hysteria. It often colours an otherwise obsessional picture. When depression is the leading symptom in the neurosis, some doctors prefer to diagnose 'neurotic depressive reaction'.

Feelings of depression are often precipitated by an external event which may be striking, as in bereavement, or relatively trivial. But it is important to recognise that what determines the quality of the depression is not the magnitude of the external stress, but its unconscious significance for the patient. Indeed, consciously, the precipitating event may be entirely overlooked.

Associated with the depression there may be impaired concentration, loss of appetite, varying feelings of hopelessness, variable degrees of self-reproach, anger and irritability. But, with the possible exception of self-reproach, these features are not specific, and may occur in any form of neurosis even when little depression is evident.

Other Neurotic Illnesses

Other conditions are sometimes referred to as if they were separate neuroses.

Depersonalisation. In this condition the patient complains that he does not feel real, that his body feels as if it is not his, that he feels a puppet or automaton, or that he feels as if he is acting in a play. In our view this condition is almost always part of another neurosis or psychosis, and constitutes a special defence against unpleasant or disturbing feelings.

Hypochondria. Some doctors also describe 'hypochondriasis', in which there is fairly persistent preoccupation with bodily health or ill health, as a separate entity. We believe that the condition is usually part of another illness such as hysteria or the obsessional neuroses. It is also very common in depression and other psychoses.

The Sexual Perversions

Human sexual behaviour varies so widely that it is not always easy to say what is normal and what is perverse. Indeed, the concept of sexual 'normality' is often a social one. Male homosexuality, for example, was entirely accepted in the Greek City State but is not tolerated in most countries today. On the other hand, female homosexuality, which can hardly be regarded as less 'perverse', rarely arouses so much condemnation.

It is difficult to give a satisfactory psychological definition of sexual perversion. In general, however, the perverse sexual act tends either to exclude or replace heterosexual genital intercourse, or to relegate it to a subordinate role. Thus the exhibitionist or the peeping Tom gets sexual satisfaction without indulgence in intercourse; the homosexual may never have sexual relations with women or, if he does, he will find relations less satisfying than those with men; and the fetishist finds the excitement he gets from the article of clothing concerned of primary importance, even when intercourse takes place.

Homosexuality in either sex may be active or passive and both forms may be practised at different times by the same person. The partners may be of any age. Some male homosexuals (probably a fairly small percentage) show a preference for children. Some homosexual attachments are very constant and the partners may live together, sometimes in great affection. Other homosexuals are promiscuous.

Fetishism. In fetishism the subject, invariably a male, is excited by some particular article of female clothing such as a stocking, a piece of underwear or a shoe. Not all fetishists require a partner to wear these items to get sexual satisfaction, but when they do the article itself is sexually more important than the person who wears it.

Exhibitionism. The man or woman concerned gets satisfaction from exposing the body, while in 'voyeurism' the voyeur gets his sexual enjoyment from spying on couples making love.

Sadism and Masochism. In sadism the sadist derives sexual pleasure from inflicting pain, while in masochism the reverse is the case.

These are the commonest perversions met with in clinical practice, though only a small proportion of perverts seek treatment.

Causes. In some adolescents perversions are merely forms of sexual experiment and have no special significance. In some homosexuals genetic factors seem to be important, especially in men with pronounced feminine physical characteristics and, equally, women of masculine build and appearance. But psychological factors can rarely be excluded.

The growing child passes through important stages where his relationship with parents, brothers and sisters make him aware of the fundamental sex differences. During these stages, attitudes of passivity or assertion, and feelings about masculinity and femininity are encountered and dealt with. Failure to negotiate these stages satisfactorily has important consequences in later sexual development. In perversions, such early difficulties have been pronounced. In addition, problems at these stages are reinforced by pathological attitudes developed even earlier in childhood.

Treatment. The majority of people with perversions never come to treatment. The fact that the symptom is in itself pleasurable tends to weaken the incentive to seek help. If, in addition, the pervert has a fairly stable and well-adjusted private life he may only wish to be left in peace.

Psychotherapy offers the best, if not the only, hope of resolving the mental conflicts behind the perversion, though its use is limited. Sometimes, especially in fetishism, a form of 'deconditioning' has been used. In some male perversions, where the urge to practise the perversion is particularly strong, synthetic hormones have been used to damp down the sexual drives.

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Anxiety Neurosis

All people experience fear and anxiety. Fear is an emotional, physiologic, and behavioral reaction to a recognised external threat. Anxiety is an unpleasant emotional state that has a less clear source. Anxiety is a response to stress, such as the break-up of an important relationship or exposure to a life-threatening disaster. One theory holds that anxiety may also be a reaction to a repressed sexual or aggressive impulse that's threatening to override the psychologic defences that normally keep such drives in check. As such anxiety indicates the presence of psychologic conflict. This is the commonest form of psychoneurosis characterised by lack of concentration, loss of interest and unforeseen fears due to adaptation to environmental stress. It may thus be said that anxiety is often accompanied by physiologic and behavioral changes similar to those caused by fear. Because of these similarities, people often use the terms anxiety and fear interchangeably. Anxiety can arise suddenly, as in panic, or gradually over minutes, hours or days. The anxiety itself can last for any length of time, from a few seconds to years. It ranges in intensity from barely noticable qualms to full blown panic. In fact anxiety serves as one element in a wide range of flexible responses that are essential for people to survive in a dangerous world. A certain amount of anxiety introduces an appropriate element of caution in potentially dangerous situations. Most of the time, a person's level of anxiety makes appropriate and imperceptible shifts along a spectrum of consciousness from sleep through alertness to anxiety and fear and back again. Sometimes, however, a person's anxiety response system operates improperly or is overwhelmed by events; in this case, an

anxiety disorder can arise. People react differently to situations. The ability to tolerate anxiety varies among people, and determining what constitutes abnormal anxiety can be difficult. However, when anxiety occurs at inappropriate times or is so intense and long-lasting that it interferes with a person's normal activities then it is properly considered a disorder. Anxiety disorders can be so distressing and interfere so much with a person's life that they can lead to depression at the same time. Others develop depression first and then anxiety disorder later. Anxiety disorders, as told earlier, are the most common type of psychiatric disorder. The diagnosis of an anxiety disorder is based largely on its symptoms. Depression and anxiety neurosis are most common anxiety disorders.

Depression and anxiety neurosis: Depression

Depression is an affective disorder with disturbance of mood. It like anxiety (with which it is associated), is ubiquitous and is a reality of everyday life. It frequently presents in the form of somatic complaints with negative medical workup. It can be a normal reaction to a wide variety of events and must be evaluated as such. Depression may occur alone or combined or in cycle with mania.

Depression usually presents with misery and malaise associated with poor self-consciousness and self-abnegation without hope.

Aetiolog : Not clearly known.

Predisposing causes :

1. Heridity is an important factor.
- 2.. Constitution : These patients are of pyknic built, obese and muscular development is poor.
3. Exposure to stress is important.
4. Organic diseases depressing the vital powers may play some role e.g. various viral diseases, candiova scular diseases, anaemia, myxoedema, cardinoma etc.

Clinical Features :

Manic depression may be present. Besides, various somatic manifestations are-loss of appetite, loss of weight, amenorrhoea, pressure headache, backache, constipation, retardation of physical activity etc.

Treatment

1. Supportive psychotherapy-sympathetic attitude towards the patient, encouragement or reassurance should be given.
2. Antidepressive drugs -
 - a. Tricyclic antidepressants e.g. Imipramine or Amitriptyline 50-75 mg tbs for a period of 3-6 months.

b. Monoamine oxidase inhibitor drugs e.g. Iproniazid 150-300 mg daily. Phenelzine 34-90mg daily. Nialamide 50-150mg daily.

3. Electroconvulsive therapy -

This is also helpful in some cases, particularly when there is high risk of suicide.

Anxiety Neurosis

This is the commonest form of psychoneurosis characterised by lack of concentration, loss of interest and unforeseen fears due to adaptation to environmental stress.

Antiology :

1. Many patients appear to have personality traits of high anxiety and poor tolerance of stress.
2. Unexpected life events which the patient cannot handle.
3. Unexpected disasters such as floods, accidents and terrorist activities.
4. Sexual background

Clinical features :

These are divided into 2 groups- psychological and somatic. If somatic symptoms predominate the patient is likely to regard himself as physically ill.

Symptoms of anxiety disorder:

Treatment :

1. Explanation and reassurance.
2. Specific relaxation techniques should be taught.
3. Change of place may be effective.
4. Diazepam 2-10mg t.d.s for 3 wks.
5. Benzodiazepines also may be used.
6. Beta-adrenoceptor blocking drug i.e. propranolol 30-80mg daily.
7. Amriptyline 50-150mg at night.
8. MAO inhibitor i.e. phenelzine 15mg q.d.s

Prognosis: Good

Interview

Stethoscope: How can we define mental illness or disorder?

Professor Firoz: A mental disorder is an illness with psychological or behavioural sign associated with impaired functioning due to a biological, social, psychological, genetic physical or chemical disturbance. It is measured in terms of variation from some normative concept. Each illness has characteristic sign and symptoms.

Stethoscope: We understand that a large percentage of the population is suffering from mental health or psychiatric disorders. Would you please tell us the approximate number of people suffering from mental disorders?

Professor Firoz: We now know that about 15 per cent of Bangladeshi population is suffering from mental health disorders. This has been gathered from an extensive study and survey undertaken randomly in 120 villages all over Bangladesh.

Stethoscope: We understand that the Institute of Mental Health and Hospital is established recently and you are the first director. Actually when has it been established.

Professor Firoz : Well, the out patient department of the National Institute of Mental Health and Hospital (NIMH) started functioning from 2001. Dr. Professor Hedayetul Islam and Professor Anwara Begum acted as Project Director for quite sometime. The Indoor treatment and admission of patients for the indoor started in May 2002. I took over the responsibilities of Director in the month of May, 2002. The Institute is the only and the first of its kind in Bangladesh. However, there is a mental hospital in Pabna (Hemayetpur) which is purely a service hospital. Our institute has a service hospital along with academic and training functions. There are 150 beds at present. Establishment of a 50 bed addiction unit in this hospital.

Stethoscope : What sort of courses are run by the institute?

Professor Firoz : We are presently running MCPS, FCPS and Ph.D courses. We are going to introduce MD course from January, next year. We also run a diploma course in psychiatric nursing.

Stethoscope : Is there any classification of mental or psychiatric disorders?

Professor Firoz : Yes, there is classification of mental disorders. They are broadly described as psychotic, Neurotic, Functional and Organic.

Stethoscope : Should substance abuse and substance induced disorders be called mental disorders?

Professor Firoz : Yes, they are very much psychiatric or mental disorders. You see nobody is immune from drug addiction. Substance abuse occurs in

all segments of all societies. The proper evaluation of any patient requires an assessment of substance use. Substance abuse results in decreased work and school performance, accidents, intoxication while working, absenteeism, violence, crime, theft etc. We treat substance abuse patients here and a fifty bed drug addiction unit is going to function within coming few months in this institute's hospital. For the drug addicts patients we provide systematic treatment. First of all they are made to stop drug and they are given detoxification therapy. This may often result in withdrawal complication. If occurs, methadone is given to combat withdrawal. Then methadone withdrawal may require slower detoxification. Once detoxification is achieved, the patient is kept under surveillance for a few days or a couple of weeks to continue absence from drug taking. During this period the patients are given psycho-therapy, behaviour therapy and counselling etc. They are released with instruction to come back for follow p periodically. It may be pointed out that treatment of abuse on dependence involves self discipline and long-term treatment. Unfortunately there is hardly any long-term stay centre in the country for treatment and rehabilitation of the substance abusers or addicts. However, there are about 120 drug detoxification centres in Dhaka alone.

Stethoscope : Thank you, Dr. Firoz. We understand that you have written a number of books on psychiatric diseases etc. for dissemination of information and for raising awareness against the social stigma in the general people. Would you please name a few of your publications?

Professor Firoz : Well, I can mention my regular magazine 'Monojagat' first followed by A Hand Book of psychiatry, All about Depression, Quick reference to clinical psychiatry, Sex Guide-1, 2, and 3, Purusher Ekanto Kotha, Mayaeder Ekanto Kotha etc.

Stethoscope : Thank you Professor Firoz for the interesting interaction.

Professor Firoz : Thank you also. It is my pleasure. I enjoy sharing ideas and views with the media. You are always welcome.

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Drug Addiction and Its Remedies

DR A.A. QUREISHI

In recent years Drug Addiction has significantly increased in Bangladesh. This agent of human devastation has spread its tentacles worldwide and also in our country. Every intelligent and humane person in the world society and international organisations such as the UN and WHO are alarmed by the present rate of addiction. In our country the regular seizures of stocks of heroin and other hard drugs by the police and narcotics department gives us an indication of the extent of addiction in our country. Nowadays nearly ten per cent of outpatients in our hospitals are cases of drug addiction involving heroin, ganja and phensidyl. These are generally youths and young men between 15-30 years of age and come from all strata of the society. But there are adolescents below 15 years of age and men and women over 30. Hospital

surveys show that average age of drug addicts is 22. The addicts are students, professionals, businessmen, labourers, rickshawallahs and from other professions. Students are most affected and drugs have caused deterioration in standards of education and stufdenst have also given up going to schools and colleges. These addicts are turning to various criminal activities, in order to procure drugs.

What are Drugs ?

Generally speaking drugs are substances that affect the physical and mental condition of persons significantly and adversely Any substance that can lead to addiction, misuse and dependence is a drug. Addiction level of drugs increase with each day of use. If drugs are not available, the patient shows critical withdrawal symptoms when immediate medical care is needed to prevent physical and mental deterioration, even death.

Drug Addiction Symptoms.

1. The addict develops a craving for the drug, and he spends all his efforts procuring it.
2. Drug tolerance in users leads to increased dosage of drugs needed to provide the same degree of enjoyment and kick.
3. Without drugs the addict loses his mental and physical abilities to work and enjoy life which is termed as psychological dependence and physical dependence.

Reasons for Drug Addiction

In brief the reasons determined through research,include :

1. Curiosity and excitement through use
2. Despair and frustration among the youth
3. Some patients are addicts because they try to follow the western culture of drugs and enjoyment of life.
4. All drug addicts in our country are afraid of social stigma more than the threat from the law.

The Dangers and Destruction Caused by Drugs

Drug addiction beings on rapid erosion of educational and cultural, moral and family values. The addicts lose their professional and educational capabilities, self-dignity, and get involved in serious or petty criminal activities. The sole aim in life of an addict becomes the procurement and use of drugs. Other aims and objectives in life are thrown by the roadside. Besides, dread diseases such as Hepatitis, HIV/AIDS can easily attack drug addicts through use of injectible drugs.

In our country, heroin is mostly smoked within aluminium foil or cigarette paper, but in other countries this is injected. Intravenous injection of

pethidine/ morphine and now tadigesic brand of riknomar penic. These are extremely dangerous drugs and increases addiction manifold. Injections through infected needles can cause diseases of the liver, brain, heart, lungs and spinal cord. Normal medication also interacts with heroin and cause many complications, which many addicts do now know about. Such interactions may also cause e death.

Heroin addiction lowers mental enthusiasm and efforts and physical ability. The addict loses contact with normal society and becomes self and drug-centred. He engages in all types of activities to obtain money to buy drugs. A Heroin addict may need about Taka 500 worth of the drug a day. He neglects the needs of the family, and those are non-earning may sell off family assets. They also go out on the streets for mugging and dacoity.

Words of Caution for the Parents

Children are the beloved of the parents. Suspicions of one's child engaged in immoral and criminal activities are a source of the utmost heartache for the parents. Yet for this very reason, children must be kept under close observation. Behavioral and emotional changes are common in the adolescent and young men. But long-standing changes and rapid shifts in mood needs specialist doctor's attention and investigation. Heroin addicts live in a dream world, unconnected with realism and the environment around them. They lose concentration, live alone, and are irritated by interference and contact with non-addicts or other addicts. They rub their eyes and legs, and lose appetite rapidly.

If you come to know that your son or daughter is a heroin addict, do not lose calm and temper. Try to take stock of the situation and seek medical attention immediately, without trying to forcibly rid your children of the habit.

Symptoms of Heroin Addiction

- a. Your shy child may become aggressive about money. Keep your son/daughter under observation.
- b. If you suspect anything, examine their rooms in their absence. Burnt paper, empty cigarette packets, oily scraps of paper are some signs.
- c. Rapid weight loss of your child. Avoidance of any reply to your queries about weight loss. Get answers from them and keep under observation.
- d. Uncertain temper, loss of appetite, lack of sleep, hand tremors.
- e. Regular onset of fever at a fixed time. Watery eyes. Asks for money for medicines and does not allow others to buy medicines.

Withdrawal symptoms vary with patients according to dosage and the patient's personality. Withdrawal symptoms start four hours after the last dosage of heroin. Eight hours later the patients yawns, sweats, with watery eyes and nose. 6 hours later his muscles start aching. No appetite at all. Within 24 to 36 hours the patient may have fever. No sleep and rise in blood pressure and pulse count results. Between 36 to 48 hours the patient may vomit with diarrhoea. Some also ejaculate. The symptoms slowly disappear.

After one week the patient feels better. But normalcy returns after two to four weeks.

Treatment. The main points in the treatment of drug addiction is to reduce use of substances, to increase public awareness and social resistance and treatment and rehabilitation of the drug addict in specialised institutions.

Resistance to Drug Use

a) Dissemination of Information: The target group has to be made aware and fully informed about drugs, its misuse and horrifying consequences. Educational institution, student and youth organisations should be involved in group discussion and meetings, with advocacy and awareness programmes through posters, slogans, radio and TV programme and various mass communication agenda, including the print media. Community leaders, politicians, sport and movie personalities can take active part in the campaign against drug addiction. Organisations to resist drug addiction must be built up by the students and youths.

b) Alternative Programmes: The inherent strengths of the youth in society have to be put to constructive work. Monotony, idleness, unemployment cause despair and frustration in the patient, and to seek solace elsewhere the target group look to drugs for comfort and to forget the trouble and tension of everyday life. Monotony and frustration may be eliminated through sports and games, physical training and competitive games, social work which make the youth adjust to the environment. Student life exposes the youth to many social pressures which leads to despair and tensions and the need for drugs to forget the stresses of modern life. Counseling of students on mental and physical health and tackling of various problem at school and college is required. Medical care is extremely and urgently necessary for the addicts. Withdrawal symptoms hinder the giving up of the habit. The first step in treatment is to stop drugs and treat for the withdrawal symptoms. Various physical symptoms of withdrawal have to be treated at this stage. Stopping the taking of heroin has to be under the supervision of a specialist. To get the patient to agree to treatment for addiction is the first step in the treatment. The patient will try to make excuses to avoid treatment. Sometime the patient stops taking requisite medication. The giving up of heroin without specialist advice is a waste of time, energy and money.

The patient should be treated in a hospital or clinic under supervision of doctors and nurses. The patient's history has to be known and understood in detail by the health professionals and then medication and course of treatment may be prescribed. The patient's personality and mental make-up has to be understood by the doctor along with the patient's physical and mental disabilities.

Once the heroin is removed from the human body, the patient and his/her family has to cooperate in a course of long-term treatment prescribed by the specialist which include considerations of the patient's depression, social environment, recreation and other aspects. The preferred treatment mode is psychotherapy. The patient and his family must be convinced of the fact that giving up heroin is not the end of the treatment course, but just the end of the beginning of the treatment. Long-term follow-up treatment is the only cure to this terrifying problem. The patients who cannot or do not undergo follow-up treatment, may again revert to addiction.

The Role of Religious Values

Many addicts can become re-addicted. Many of their religious and moral values are not strong enough. Drug treatment and rehabilitation centers may be attached to mosques and other places of worship. Induction of religious values is a significant part of the treatment. The whole course of treatment of drug addiction revolves around the restoration of social, community and religious values in the patient. Addicts are many a time found to be oblivious about religious imperatives and rituals.

Conclusion. The main elements in combating Drug addiction include measures to control availability and use of drugs, treatment of withdrawal symptoms, and restoration of social moral and religious values. To prevent re-addiction in patients, innovative treatment containing medical, social and religious aspects have to be put in place. Easy availability of treatment will ensure the elimination of this socially and physically dreaded disease.

Treatment of addiction in our country is still not in a hopeful stage. Some unqualified and unscrupulous people are engaged in making money out of this affliction with mushrooming organisations and signboards, which confuse the patients. Such institutions do not have doctors. Others falsely advertise the availability of services and doctors form abroad. Such doctors even if available cannot be very effective, unless they are truly knowledgeable about our social, cultural and economic environment.

Its is time that experienced and qualified doctors and health professionals come to the aid of the addict in our society, and give genuine and prolonged treatment and care.

The author is a psychiatrist and specialist in treatment of drug abuse (The original article in Bangla was translated by Mahbub Husain Khan).

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Gamma Knife

A Wonder Brain Disease Treatment

SHAKTI R. PAUL, MD

"This is such a wonderful experience!" sighed Mr. Islam with relief upon emerging from the Gamma Knife treatment room. "I was so worried - almost devastated - with the diagnosis of my brain tumor. I constantly thought about a painful brain surgery. I even thought of death from it," he continued. "Then through a local doctor I contacted Dr. Paul, a Bangladesh-born doctor in Bangkok Hospital. He assured me that I do not in fact need an open surgery. "Your brain tumor could be treated by Gamma Knife (GK), Dr. Paul wrote to me in an e-mail," says a happy Mr. Islam.

"At first I could not believe Dr. Paul's suggestion. My doctors in Bangladesh and another reputed hospital in Thailand told me that I must have open brain

surgery," explained Mr. Islam. "Finally, I arrived at Bangkok Hospital. There, I met Dr. Dittapong Boonampol, a neurosurgeon specialized in GK treatment who confirmed that GK is the treatment of choice for my specific condition".

What is GK? It is a single treatment modality unit which emits 201 Gamma Ray beams stereo-tactically and precisely to the brain lesion without harming the surrounding tissues. It was invented by Professor Lars Leksell in 1968 at the Karolinska Institute Stockholm, in Sweden. It is a great medical contribution to humanity, and is no widely acknowledged as the best choice for the treatment of many brain diseases. This treatment requires highly trained and knowledgeable staff including physicians, nurses, medical physicists and technologists.

"The technology of GK itself is a major breakthrough" explains Dr. Dittapong. "It maximizes its accuracy and capacity by using imaging techniques like CT, MRI, and Cerebral Angiogram which enable a physician and medical physicist to precisely locate the lesion, and then calculate the volume and strength of the required radiation" he adds.

For treatment, the stereo-tactic frame is applied to the precise spot of the lesion to treat it. When an application session is finished, the frame will gradually degenerate, and the entire treatment procedure will be completed. The actual treatment usually lasts 30 minutes up to 2 hours.

After completion of the treatment procedures, the physicians at the hospital will observe the patient for a night before discharge.

I was not given any general anesthesia but had no pain, no incision, or bleeding. Dr Dittapong asked me to listen to my favorite music while I underwent two hours of GK treatment. Via microphone he -spoke with me from time to time from his treatment monitoring room." continued Mr. Islam. Mr. Islam was surprised when at one point during the treatment the doctor told him, "You could go to toilet or have some snacks, and then continue treatment". His conditions improved dramatically after only one week of treatment.

How GK treatment is given

The following are the step by step procedures for GK therapy:

1. Frame Fixation:

The stereo-tactic frame, which is fully adjustable, is applied to the patient's head. This is like a motorcyclist's helmet, albeit a larger one.

2. Imaging of the Lesion: CT scan, MRI or Angiogram is conducted to draw up 3D images of the lesion(s).

3. Computing Treatment Plan: The information obtained from the imaging devices is loaded into a computer program to generate a treatment plan. Radiation dosage is then calculated according to patients' specific situation.

4. Treatment: The patient is brought into the treatment room. Helmet and

frame will be applied to the patient's head and then the radiation process will commence. The calculated dosage will be automatically emitted into the brain. The treatment process takes only 30-120 minutes.

5. Rest and observation: Usually the patient will be observed for a night after treatment. But in many instances it is not necessary to do so.

Indications of GK treatment

According to Dr Dittapong, GK is used for a wide variety of brain conditions. While some of them have very good responses, the physicians are perfecting treatment modalities for the others. In short, the established indications for GK treatment are as follows:

1. Vascular disorders: At present Arteriovenous Malformation (AVM) of the brain is the main target of GK therapy. Over 80% of patients resulted in total obliteration of the lesion in two wears. It is very difficult to treat AVM by open brain surgery, so GK is now becoming the primary choice of treatment. In recent years, vascular aneurysm and other vessel disorders are also treated by GK.

2. Benign tumors: Over one-third of all GK treatment were applied on various types of benign brain tumors e.g. acoustic neuroma, meningioma, pituitary tumor or macroadenoma, pineal tumor, trigeminal neuroma etc. 90-95% of patients have had very good control of tumor growth. Facial nerves are consistently preserved in almost all of the cases unlike conventional open surgery, which often resulted in facial paralysis. Also, 80% of acoustic neuroma cases treated by GK did not lose hearing after GK although it is very common to occur after an open surgery.

3. Malignant tumors: Brain Metastasis (single or multiple) can be surgically radiated by Gamma Knife and has resulted in good control of tumor growth. Up to 8 lesions can be treated simultaneously by GK. This is almost impossible to do by an open surgery. Glial (malignant) tumors are increasingly treated by GK because of much better results than open surgery. Recently, progress has been made in the treatment of ocular melanoma by GK.

4. Functional targets: Response to GK treatment for Trigeminal Neuralgia is quite good in patients with intractable (severe) pain. With medications alone, some patients suffer from severe pain and disability for long time. GK is also promising results for the treatment of Parkinson's disease, epilepsy, intractable pain and even some psychoneurotic conditions.

Why a patient should choose GK treatment

According to Dr. Dittapong, GK is truly an alternative for the treatment of brain diseases, particularly for the treatment of tumors. AVM, various types of brain lesions, and functional disorders. As compared to conventional surgery, it is much safer and easier for the patient. He summarizes the followings as some of the advantages of GK:

n For a deep lesion such as a brain stem lesion, Gamma Knife surgery is a better and less riskv alternative because the radiation can access the location

of the lesion for treatment without harming the surrounding tissues. There is very high risk in treating a deep lesion through conventional open surgery.

n Gamma Knife surgery does not require anesthesia. This greatly reduces the risks for the elderly and patients with heart or lung diseases. Coventional open surgery reeuires general anesthesia.

n A maximum of two days of hospitalization may be required. Conventional surgery ma-v require intensive care, and more than 10-20 days of hospitalization. In comparison, there is no risk of blood loss, infection or pain, no incision, no scar or hair shaving. It is inexpensive and requires no post-surgery care.

How widely GK is used

At present, there are approximately 180 Gamma Knife centers worldwide. Most of these centers located in developed countries like USA, Japan, Europe and Australia. In Southeast Asia such facilities are available in Japan, Korea, Thailand and Singapore.

"Bangkok Neurosurgical Gamma Center is the first and only one in the Thailand," explains Dr. Yingdao Krairiskh, Director of Bangkok Hospital. She adds, "It is an independent center and therefore maintains a policy of being an open center and welcome any qualified physicians from both government and private hospitals to bring their patients who are in need of Gamma Knife treatment. At present there are seven well qualified surgeons associated with our center". "This is part of our overall commitment to bring in most modern and sophisticated technology for the highest level of care for our clients", says Dr Yingdao.

Since the inception of the Bangkok Neurosurgical Gamma Center in 1996, it has treated 960 patients. "Proportional indications of GK use in our center are similar to that of the global data" comments Dr. Dittapong. "As a result, we have the same experience of GK treatment like that of USA or Europe. So a patient in Asia could avail the western standard of medical treatment in Bangkok but only for a fraction of the cost that they would have to pay in the developed countries," observes Dr. Dittapong. He concludes, "GK is truly a wonder treatment for brain diseases, and continues to bring happy outcome for people like Mr. Islam".

Dr Shakti Paul is an Internal Medicine specialist in Bangkok Hospital. He is the only Bangladesh born licensed medical practitioner in Thailand. He is also among the handful of foreign doctors in this country.

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Knife Features of Key Gamma

n Gamma Knife is not really a knife. There is no anesthesia and no incision except for certain cases that require local anesthesia for the frame fixation. It is a bloodless and almost painless procedure.

n It uses Gamma rays that is powerful enough to destroy the undesirable tissues in the brain, such as a tumor or arterio-venous malformation (AVM).

n GK treats a lesion precisely without harming surrounding brain tissues, scalp hair or skull. The precision is so high and definite that a small lesion in a range of 1 to 2 millimeters is treatable.

n The radiation can access almost any particular area of the brain. It is therefore very useful for the treatment of deeper parts or the base of the brain, which are very difficult to reach by conventional open surgery.

n The volume, strength and direction of the radiation beam are controllable so that it can be adjusted to fit the patient's condition, and diverted from the undesirable area as required.

n There is no chance of infection or need for blood transfusion. No shaving of hair or scar on the scalp results from this treatment.

n There is no lengthy post-operative care or loss of productive life. The patient can return to normal life only a day after surgery.

n It is relatively cheap compared to long hospitalization, antibiotic therapy, rehabilitation process etc. for an open brain operation.

n No death or disability related: to the GK procedure.

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Mental Health and Diet

MAHBUB HUSAIN KHAN

Mental health problems and psychiatric illness range from mood disorders to depression to schizophrenia and other complicated psychiatric problems.

Individuals with depression often fail to take care of themselves, neglecting their appearance and eating irregularly. Depressed people are especially careless about their nutrition.

The resulting poor nourishment may impede recovery. There is some evidence that the amino acid, tryptophan, a substance needed to make the neurotransmitter serotonin, can help induce sleep and play a role in treating certain types of depression.

Choline, a nutrient that is grouped with the B vitamins, has been studied in the management of depression and other psychiatric problems. For the depressed person's nutritional needs he/she should eat plenty of high-grade proteins, such as meat, liver, dairy products, eggs, fresh fish for tryptophan and choline to promote good nervous system function.

Caffeine can interfere with sleep and mood and should be cut down on.

Foods and drinks containing tyramine such as bananas and bean curd, fish roe, liquid and powdered protein supplements, preserved meats should be avoided.

Our thoughts, emotions, moods and attitudes, as well as nerve and muscle functions are all centered in the brain. Positive links-foods that lift the mood are harder to find.

To calm down the patient and prevent abrupt changes in moods calming meals should be prepared containing a variety of complex carbohydrates to supply the brain with amino acids. A meal of pepper, rice and beans provides the amino acids and complex carbohydrates used to make soothing brain chemicals.

Also seafood, dark-green leafy vegetables and whole -grain breads, cereals and pasta/noodles for B-group vitamins should be eaten. Cut down on caffeine and cola and sugary foods.

Schizophrenia is a devastating mental illness characterized by hallucinations, delusions and bizarre thoughts and behaviour. For the schizophrenic, the diet should be a combination of animal protein and starchy foods to increase brain levels of tryptophan, a calming amino acid. Beverages high in caffeine, and smoking, should be avoided.

Prolonged stress, whether psychological or physical, plays havoc with digestion and nutritional needs. Certain foods can provide the extra energy or comfort needed to get through a stressful period. Extra carbohydrates, both sugars and starches are required to provide fast energy.

In addition, extra dietary protein, preferably from lean meat, fish, low-fat milk, and egg whites, is needed to help prevent muscle wasting. Vegetarians can get proteins from tofu and a combination of grains and lentils, dried beans and peas and other legumes.

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Can We Fight Depression?

STEN THELANDER

If one enters the term "mood disorder" in the largest online medical database - Medline - you get close to 62,000 hits. If you restrict your search to randomized controlled trials, generally considered the most reliable design for investigating the efficacy of treatments, still more than 3,200 hits appear.

Considering the huge impact worldwide of depression on health, health care costs, and the ability to work, so much information should be good news. But look more closely at individual studies and it soon becomes obvious that most investigate physiological, metabolic, or biochemical disturbances associated with depression. None of these findings have been shown to be of any help for deciding which patients should be treated with what therapies over what period of time.

Of course, there are still roughly 1,500 studies of a multitude of treatments: psychopharmaceutical drugs, ECT, bright light, exercise, psychotherapies, and even acupuncture. True, many of these studies document the short-term, and in some cases the long-term, effects of various treatments, and generally with an acceptable trade-off between efficacy and safety.

To be sure, if many millions of people are prescribed a group of drugs, not only for depression, but also for many other mental health problems, it is quite reasonable that some of them will suffer an adverse effect or reaction. But blanket claims that antidepressant drugs are dangerous, addictive, or bad in other ways are not based on strong evidence. Reports of severe adverse effects in adults are rare, while children and adolescents with depression seem much more vulnerable.

Possibly the biggest obstacle to more effective treatment is that the diagnostic category "major depression" is so heterogeneous as to be outright unhelpful when trying to decide on a therapeutic plan for an individual patient. Of course, the level of severity of depression is obviously relevant, but few treatment studies use this criterion. Melancholia, a depressive subtype with more biological abnormalities, should be another candidate for treatment studies, yet few have been undertaken.

Pharmaceutical companies sponsor most drug treatment studies, with the primary purpose being to secure the licenses required to market their products. To increase the speed of the process, patients are recruited by advertising and many trials are subcontracted to specialist trial companies with little or no interest in the long-term welfare of patients. In many trials, companies are paid per patient recruited, regardless if a patient remains in the trial or not. Unsurprisingly, dropout rates are high, often more than 50% after six weeks.

Failed studies - meaning studies that do not demonstrate significant differences between an active drug and a placebo - are common. This obviously is contrary to the interest of the funding company, but so far it has not resulted in substantial changes in the way trials are done.

Because pharmaceutical companies want their drug to work, they are rarely interested in studying what to do if it is ineffective. That is true even when we know that only two-thirds of patients respond to a drug, and that significantly fewer get completely well.

So clinicians are faced daily with questions about which drug to administer, but the base of empirical evidence for this decision is appallingly thin. Several large government-funded trials are ongoing, and it is hoped that these will improve the scientific basis for decision-making within the next few years.

Another major area of ignorance concerns the extent to which results generated in specialized mental health settings can be transferred to primary care, where the majority of patients with depression are treated. The uncertainties are not so much about treatments, because patients with similar levels of severity should respond in rather similar ways regardless of the treatment setting. A much more important uncertainty is whether the chronic course of major depression treated in psychiatry is similar in primary care. If so, many more patients should probably be recommended to receive long-term

treatment with antidepressants. Moreover, the huge problem with compliance, similar for all prophylactic treatments in medicine, must be addressed.

Finally, has the enormous increase in prescriptions of anti-depressive drugs, and the greater availability of short-term psychotherapies, self-help manuals, and Internet support, had any positive impact on health? Here, too, the data are contradictory or preliminary, with some indicating a decrease in suicide accompanying the increase in use of antidepressants. But this does not hold true in all countries or all age groups, so other factors must be influential, too.

A more revealing-and distressing-indicator is that sick leave and disability pensions due to depression are on the rise in many Western countries. Moreover, the first depressive episode occurs in ever-younger children or adolescents, implying that research on primary or secondary prevention should receive higher priority.

On the level of the wider population, the battle against depression has not been won.

But there is good news: for individual patients with depression, the possibility of getting completely well is high, assuming that effective treatments are used in a skillful and persistent way.

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The Treatment of Psychiatric Illness

Psychological Treatment

General Measures or Simple Psychotherapy

Any contact between doctor and patient has psychological aspects. A simple act, such as writing a prescription, has a psychological meaning. This depends on the setting in which the act occurs, the way it is carried out and the respective psychological attitudes, conscious and unconscious, of patient and doctor towards each other. To one patient the prescription may convey only kindness and consideration. To another it may be seen as a gesture which silences him, which stops him talking about his troubles and, by implication, tells him to take them elsewhere.

Reassurance and Suggestion. Often the doctor deliberately tries to influence the patient's symptoms by psychological methods. He may try by persuasion, reassurance and encouragement. He may offer advice on the patient's management of everyday affairs. Sometimes he tries suggestion. This means that the doctor uses his authority and influence with the patient to convince him he is getting better or that a particular course of action will be helpful.

Abreaction. General discussion of the patient's difficulties may also help by

allowing him to 'get things off his chest' and unburden himself to someone he can feel is an interested observer, yet who is more impartial than his family and friends. Sometimes the release of pent-up emotion during such discussion leads, at least, to temporary relief. This process is called 'abreaction'.

Such methods can be termed 'simple psychotherapy', to distinguish them from the 'dynamic' treatments described below. It should be added that this distinction has nothing to do with efficacy.

Dynamic Psychotherapy

Dynamic psychotherapy or interpretative psychotherapy covers those methods of treatment where an attempt is made to use the doctor-patient relationship to increase the patient's knowledge of himself. This means that some of his unconscious motivations are brought into consciousness. The basic assumption is that, if this is done, the patient's more pathological defences, from which his symptoms result, become unnecessary.

The first form of dynamic psychotherapy was psycho-analysis. It will be discussed at some length, to help in understanding the modified and shorter techniques.

Psycho-analysis

A basic assumption in psycho-analysis is that there is a reason for all mental events, however haphazard they appear.

Free Association. In ordinary social conversation many ideas which occur to the speaker are not expressed, because they may be irrelevant, out of place, or in bad taste. But in psycho-analysis the patient is asked to tell the doctor everything that occurs to him - thoughts, feelings, fantasies, sensations-as he experiences them during the session and without any reservations whatsoever. This is known as 'free association' and is the basic rule for the patient. The doctor's role is that of an interpreter. This means that he listens carefully to all that the patient tells him and, as occasion fits and the pattern of mental events becomes clear, interprets to the patient the emotional significance of what he says. The process is gradual, but this does not mean that there is any attempt to avoid painful or anxious feelings. These, like any others, must sooner or later be faced.

In its pure form, this treatment avoids any direct use of methods of influencing the patient. This means that the measures described as 'simple psychotherapy' are never deliberately practised. Thus it is held, for example, that the best form of reassurance is a correct interpretation, since it shows the patient clearly that the doctor is in touch with his feelings.

Regression. Treatment is aided by a very remarkable fact. The situation fosters regression and in this way the patient's childhood, in a sense, is again accessible to observation, as more childish ways of thinking or feeling replace adult ones, and the patient behaves, often in spite of himself, as if the doctor were an important figure in his childhood, such as a parent. Surprisingly, this occurs irrespective of the age, sex or appearance of the doctor.

Transference. This displacement of feelings from a parent or other important

person to the doctor is known as 'transference'. Because it may have all the violent qualities of love and hate felt towards the original figure, the doctor-patient relationship can become the central and most important object of study. Consequently, one aim of the doctor is the interpretation of events occurring in the transference. From this he can try to show the relationship of these events to others in the patient's life, whether past or present.

Character Change. If treatment is successful there is usually some degree of character change, so that aspects of the patient's behaviour which increased his difficulties are modified. This cannot happen quickly. Few analysts would expect substantial changes in less than eighteen months or two years, even when the patient attends for an hour five times a week.

Doctor and Patient. In orthodox psychoanalysis, the patient lies on a couch while the doctor sits out of sight, because it is thought that both patient and doctor are thereby more relaxed, the patient better able to concentrate on 'free association' with less distraction, and the doctor freer to devote his attention to the patient's productions and their meaning. Patients, of course, often try to discover whether the doctor approves or disapproves of what they are saying, and they may fancy that it is easier to do so when they can watch the doctor's facial expression. Perhaps we should add that during this treatment, and in all forms of dynamic psychotherapy, the doctor is careful not to express moral criticism, since this would be an attempt to influence the patient's behaviour without trying to understand it. It would also seriously interfere with the patient's ability to follow the basic rule of free association.

As far as we can see at present, analysis is more likely to be useful in the neuroses than in the psychoses, though attempts are sometimes made to treat the latter. It is not usually indicated in people much older than forty or who are unintelligent. But the most serious disadvantages of psycho-analysis lie in its great length and in its expense. It is not generally available under the National Health Service at present.

Shorter Forms of Psycho-analysis

Because of the length of time and expense involved, psychiatrists have sought short cuts in interpretative psychotherapy. In these shorter techniques it is not always possible or desirable to avoid reassurance or advice. But almost without exception all forms of dynamic psychotherapy use the concept of transference in their work with the patient.

Sessions vary in length and frequency, but are usually from half to one hour once or twice a week. Most doctors agree that the longer the interval between sessions, the more difficult the task. If intervals are too long it becomes particularly hard to interpret the transference material correctly.

Modification of Pressing Conflicts. Before treatment itself starts, a careful history of the patient is taken and the likelihood of psychotherapy being helpful is assessed. Many doctors find it convenient to set themselves a particular goal in treatment. This need not be an ambitious one. It may be concerned with the modification of the patient's more pressing conflicts by interpretation of his more prominent defences. It is unrealistic to set these goals too high. In general, less urgent conflicts will be ignored in short-term treatment.

In shorter methods of psychotherapy it may be necessary to direct the patient's attention to particular periods or aspects of his life, even when his free association is not leading in that direction. This may have to be done by questioning. But the emphasis will still be on interpretation of what the patient communicates to the doctor and especially of the transference relationship.

Face-to-Face Interview. In many forms of dynamic psychotherapy the couch is discarded in favour of a face-to-face interview. There are many practical reasons for this. One is that the use of a couch occasions much anxiety in itself, partly because it produces a greater degree of regression. Many psychiatrists prefer not to invite this state of affairs when they have less time than the analyst to deal with this situation. However, the face-to-face technique can be exacting for both parties and, while the doctor must be natural in his manner, he must try not to convey, unintentionally, attitudes detrimental to the patient's free expression.

No Rigid Rules. The kinds of dynamic psychotherapy vary greatly in detail as do the conditions in which they are practised. However, certain basic conditions seem necessary. The patient's time must be respected; for example, it seems important for him to know in advance the times and duration of his sessions. Consistency in appointments is desirable. Free expression must never be discouraged. But when this has been said, it must be emphasised that there are no rigid rules in dynamic psychotherapy. Techniques need to be adaptable and imaginative. They call for great skill, which is why not every psychiatrist would care to use them.

Finally, more than anyone else, the psychiatric patient is inclined to feel that no one has time for him or is willing to help him. To feel that he can be respected as well as tolerated is in itself a corrective emotional experience.

Dynamic Group Psychotherapy

Before the Second World War some attempts had been made to treat small numbers of patients collectively in groups. An increasing emphasis on psychiatric treatment stimulated by the war revived interest in these methods.

Free Discussion. In dynamic group psychotherapy the patients, usually six to eight in number, sit in a circle together with the doctor. The length of the session varies, but in Great Britain it is usually an hour and a half. The 'free association' of individual therapy is replaced by 'free discussion'-there is no set subject and the doctor does not direct the discussion. As in individual treatment, his role is essentially that of interpreter. Here again he tries to avoid those methods of influencing patients described as 'simple psychotherapy'.

Open v. Closed Groups. Groups are of two kinds: open and closed. In an open group patients may join and leave at different times during the course of the group. As each patient goes he is replaced by someone else, so that the composition of the group changes. In a closed group, on the other hand, all patients start and finish their treatment at the same time.

An open group can be rather unsettling for patients who need long-term treatment. A closed group is better for such people. Patients who seem able to benefit from two or three months' treatment are, on the other hand, perhaps best treated in an open group. An open group can also be useful for an initial

period of observation and assessment. If found suitable, a patient can then be transferred to a closed group. A closed group may continue for anything from six months to a year, sometimes much longer. In the case of out-patients the group meets once or twice a week, but in a few in-patient centres five sessions a week are offered.

The Interpretation. The doctor may interpret the behaviour of the group as a whole, or he may interpret that of a given individual. Most doctors prefer to interpret principally group behaviour in the early stages, to help the group to work together as a coherent unit. But individual interpretations are important and will certainly be made as the group progresses. There are, of course, no rigid rules and the technique needs to be adapted to the situation prevailing in the group at the time.

As in individual therapy, special importance is placed on the interpretation of transference. Here again, the aim of treatment is to examine a current situation in an attempt to bring to light unconscious factors in the illness.

While patients with many different kinds of psychiatric illnesses can be helped in groups, there are indications that some patients with long-standing personality disorders can benefit more from group therapy than from individual treatment.

Other Forms of Group Therapy

There are other kinds of group therapy where no attempt is made to conduct the treatment on dynamic lines. Mutual discussion of personal problems is the usual basis of a supportive group. Some doctors conduct groups where the emphasis is on explanation rather than interpretation.

Some combine these methods and also include active counselling. Some hospitals use larger groups in which patient and staff-including nursing staff meet to discuss everyday problems of running the hospital. In groups such as this the patients often receive other forms of treatment as well.

Drug-assisted Techniques

In these methods, psychotherapy is used together with some form of stimulant, sedative or anesthetic.

The patient lies on a couch and the doctor sits at his side. Most drugs are given by injection into a vein, usually in the forearm. In the case of an anesthetic such as ether, the patient's face is covered with a mask on to which the ether is dropped.

For Abreaction. One use of this method is to facilitate abreaction. If it is felt that the illness is largely concerned with a single disturbing episode (as in some wartime cases of battle neurosis), the patient may relive the disturbing scene, thus 'abreacting' or giving vent to his pent-up emotions of fear, rage or grief. It is hoped that, if this is repeated a number of times, the individual can be brought to face his disturbing past more easily. The drugs which are often used for this purpose are those of the sedative group, and ether. In each case, the aim is to give just enough of the drug to make the patient drowsy and a little 'drunk'. He can then usually be persuaded to relive the scene concerned

without too much difficulty.

For Narcoanalysis. The sedative group of drugs is also used to facilitate exploration of those events in the patient's past which may have a special significance for the present neurosis. This is sometimes called 'narcoanalysis'. Here the aim is to make the patient relaxed, so that he can survey his past without too much anxiety.

For Amnesia. An intravenous sedative can also be used for patients with a massive hysterical loss of memory. It is often possible, in this way, to re-establish the events of the period covered by the amnesia.

For Reticent Patients. When a patient finds it difficult to talk about himself and his difficulties a stimulant can be used. Methylamphetamine injected into a vein often makes a reticent person feel talkative.

Hallucinogens. A further group of drugs, the hallucinogens such as LSD (lysergic acid diethylamide), mescaline, and psilocybin, have been employed to enable a patient to relive his childhood. Their usefulness is at present under discussion.

'Truth Drugs'. These methods are sometimes described in newspapers as treatment with the 'truth drug'. While their aim is indeed to help a patient tell the truth if this is repugnant or embarrassing to him, no drug yet discovered can make him do so if he does not wish to.

Hypnosis

Hypnosis is used as an abreactive technique or for exploration, with the same aim as the administration of sedative drugs. Commonly, it is used to reinforce suggestion.

The technique varies: most hypnotists develop their own. One method is to ask the patient to relax, preferably on a couch. The hypnotist then stands in front of him and holds a small bright object in such a position that a very slight strain is imposed on the patient's eyes. The room is darkened a little. The hypnotist then repeatedly assures the patient that he can't keep awake, feels drowsy, is very relaxed, and so on. Once the patient is hypnotised, the hypnotist 'suggests' that the patient's disability will grow less or disappear and that he will not remember it in the waking state. Many sessions of treatment may be required.

The procedure is so frequently followed by relapse and so liable to produce an abnormal dependence on the hypnotist that many authorities consider it of little use in psychiatric illness.

Pavlovian and Learning Theory Methods

Conditioned Reflex. Pavlovian methods of treatment are based on Pavlov's discovery of the conditioned reflex and the branch of biology deriving from this. Pavlov demonstrated that an organism can be trained to respond automatically to a given stimulus and to repeat this response in an identical way on subsequent occasions. For example, whereas the mouth normally waters in response to food, an animal can be trained to salivate at the sound of

a bell.

Attempts to apply findings of Pavlovian physiology to the treatment of certain psychiatric disorders have been made in recent years in Great Britain, Russia and the United States of America.

'Learning theory' makes use of Pavlovian ideas together with knowledge gained from watching young animals and young children and studying their processes of learning. Neurotic symptoms are regarded not as part of a disease process but as habits developed on the lines of conditioned reflexes.

Treatment aims, broadly speaking, at conditioning the patient to respond in new and more satisfactory ways, and at deconditioning him from undesirable responses. Many methods of treatment have been devised, of which the following are only examples.

Buzzer for Enuresis. One device which has been developed is designed to help nocturnal enuresis (bed-wetting). When the sleeping patient begins to pass urine an electric circuit is completed and a loud bell or buzzer, placed at the bedside, rings. This wakes the patient who can then complete urination in the toilet. This procedure is repeated nightly for several weeks. The patient then begins to associate a full bladder with the bell-ringing and with awakening. The hope is that, even when the device is withdrawn, the full bladder will now cause the patient to awaken and use the toilet.

Cat Phobia. A method of treating phobias has also been devised and recently applied in the case of a patient who was terrified of cats and everything connected with them. She was first shown furry materials and later encouraged to touch them. Eventually she was able to hold and even stroke the material. She was soon prepared to tolerate photographs of cats, and later to stroke small kittens. In due course she was able to encounter cats without fear.

Other phobias have been treated in a similar way.

Writer's Cramp is one example of a hysterical condition which has been treated by related methods. In this case small, repeated electric shocks are passed which make maintenance of the 'cramp' difficult. Eventually the patient may learn to use a pen without the intervention of the machine.

Aversion Therapy. A form of treatment known as 'aversion therapy' has been used to treat alcoholics. The patient is given injections of a drug which causes vomiting; apomorphine and emetine are examples. He is given alcohol to drink just before the drug can be expected to work. Again, the hope is that in due course he will come to associate the drinking of alcohol so strongly with vomiting that such drinks will revolt him. The procedure may have to be repeated separately for beer, gin, whisky and so on.

Finally methods have also been evolved whereby some sexual perversions, notably fetishism, can be treated. These rely on training the patient to become actively averse to the article of clothing concerned instead of becoming excited by it. But it must, of course, be emphasised that none of these methods, even when successful, does anything to resolve the mental conflicts underlying the symptoms.

Occupational Therapy

This term is used to cover a wide range of activities in which patients participate, under the guidance of trained staff, as part of the treatment of medical, surgical and psychiatric illness. At its simplest it provides a series of handicrafts to occupy and divert patients who are bed-bound or otherwise incapacitated. More active and complex programmes are used for rehabilitation and retraining. Individual requirements of psychiatric patients differ greatly, but most in-patients and day patients need a full occupational regime at some stage in their treatment.

Graded Tasks. A patient recovering from a severe illness may be given a series of tasks which can be stimulating or soothing. These may be graded from simple to more complex tasks as the patient's condition improves, to give increasing exercise in concentration and the regaining of self-confidence. He or she may begin with undemanding work such as basket-making, proceed to handicrafts requiring more skill and later take up activities akin to his or her own work. Many occupational therapy departments can provide facilities for housecraft, woodwork, metal work and typing and clerical work. At this stage it is particularly encouraging for the patient if the work is of immediate use to the other patients or to the hospital.

Social Aspects. Patients in hospital for a considerable period tend to lose touch with social activities and with everyday responsibilities. This may impede return to full health. One aim of a psychiatric hospital is to provide for its less incapacitated patients the facilities for a full regime of work, social activity and physical exercise. It is usually helpful for the patient to feel that he retains responsibility for himself, and most hospitals encourage patients to arrange the details of their work and leisure, and to organise work projects and social activities such as dances and discussion groups.

Many of these patients enjoy music, and groups provide entertainment from 'pop' bands to church choirs.

The idea of the hospital as a small community of people representing both the family and civic group is an important one. Most psychiatric illnesses are characterised to some extent by an impairment of ability to live happily in reasonable harmony with relatives and society. Through the various activities described and particularly during the course of psychotherapy, the patient may be helped to improve his relationships with people, to function in a way both satisfying to himself and to the community, to accept the needs of the group when they conflict with his own, and to contribute to the group. His day-to-day experiences in the hospital community may be discussed in psychotherapy sessions and may give him a wider understanding of himself and his difficulties.

Acting a Role. Some additional occupational activities have special aims. In playreadings and psycho-drama, patients may gain understanding of personal problems by acting roles allotted to them. For example, a young girl playing the role of a mother may come to understand more clearly her own mother's interests and difficulties. Art therapy provides the satisfaction of self-expression and the patient may, in depicting his own experience and emotions, gain greater self-awareness.

Physical Treatments

Treatment by Drugs

The various drugs used in the treatment of psychiatric illness fall into four main categories: sedatives, stimulants, tranquillisers and antidepressants. They are all used empirically, that is, while they are known to have particular effects, the way in which they act is unknown or only partially known.

Of recent years many new drugs have been discovered and developed, notably the tranquillisers and the antidepressants. Some of them have greatly improved the management of many disorders and, in some illnesses, have appreciably altered the outlook. With other drugs, however, the initial optimistic claims have not been confirmed by medical experience. The greatest care is necessary in the close study of a new drug to establish its usefulness.

Sedatives. These are drugs which reduce the activity of the brain and the rest of the central nervous system. In small doses they reduce restlessness, feelings of anxiety and tension. In larger doses they induce sleep. In very large doses their effect is powerful enough to abolish breathing. Until the discovery of the tranquillisers they were the only medicaments available for the control of anxiety, restlessness and excitement.

They have certain disadvantages. They cause sleepiness, and sometimes depression in all but the smallest doses. There is a tendency for the system to become accustomed to them and larger doses may be required or addiction may develop.

This group includes many drugs having very similar effects, but which differ chiefly in the speed and duration with which they are effective. Medium and long-acting ones are used in relatively small doses for their calming effect. Medium and short-acting ones are used in larger doses to induce sleep in cases of insomnia or in sleep treatment.

Sedatives are usually taken by mouth, but they may be given by injection when a more marked and powerful effect results. The more commonly used sedatives are:

Barbiturates:

Phenobarbitone (Luminal)

Amylobarbitone (Amytal)

Pentobarbitone (Nembutal)

Hexobarbitone (Evipan)

Paraldehyde

Chloral Hydrate

Tranquillisers. Tranquillisers have a calming effect in certain conditions and

cause less drowsiness than the sedatives. They can therefore be used in larger doses, leaving the patient alert. They also have the advantage of not depressing respiration even in very large doses and they are to this extent safer than the sedatives. Tolerance and addiction are also much less likely to develop. Some tranquilisers have a number of side-effects, including dryness of the mouth, fall in blood pressure and stiffness of the muscles.

Tranquillisers are frequently used in the treatment of anxiety or restlessness accompanying any psychiatric condition. The older tranquillisers are used chiefly in schizophrenia, mania and in organic states, being relatively ineffective in the psychoneuroses. Other tranquillisers, such as chlordiazepoxide (Librium) and thiopropazate (Dartalan) are more effective in these latter conditions.

In schizophrenia, these drugs may be strikingly effective in reducing disturbed behaviour, hallucinations, delusions and thought disorder.

The better known tranquilisers are:

Chlorpromazine (Largactil)

Promazine (Sparine)

Trifluoperazine (Stelazine)

Diazepam (Valium)

Antidepressants. Their name is self-descriptive. Unlike the stimulants they have no effect on people who are not depressed. They may be used in cases where a mood of depression exists, whether in depressive illnesses or in neuroses with depression. They are frequently used for patients who would previously have been given electrical treatment.

Their side-effects include dryness of the mouth and fall in blood pressure. It is customary for these drugs to be taken in tablet form:

Imipramine (Tofranil)

Phenelzine (Nardil)

Tranlycypromine (Parnate)

Amitriptyline (Tryptizol)

Stimulants. These drugs, especially the amphetamines, produce increased wakefulness, postpone the need for sleep and may increase the flow of mental activity. They do not, however, markedly improve a mood of severe depression. They may produce or increase anxiety. Amphetamines are sometimes given as an aid to slimming, because they tend to diminish appetite. In large doses, usually over a period of weeks or months, acute toxic confusional psychoses may be produced.

Patients with unstable personalities may become addicted to stimulants. Amphetamines are often prescribed combined with a small dose of sodium

amyltal in the same tablet. This counteracts the tendency for anxiety to be produced. The more commonly used stimulant drugs are:

Caffeine

Amphetamine Sulphate (Benzedrine)

Dexamphetamine Sulphate (Dexedrine)

Methylamphetamine

Hydrochloride (Methedrine)

Phenmetrazine Hydrochloride (Preludin)

Electroplexy

(Electroconvulsive Therapy)

The development of electroplexy arose out of the observation that spontaneous convulsions appeared to have a favourable effect on various sorts of mental illness. The supposed rarity of epilepsy in schizophrenia led to the conclusion that these two conditions were opposed to each other.

In 1936 the first attempts were made to treat schizophrenia with drug-induced convulsions. In 1938 the production of a convulsion using an electric shock was developed and this is the method commonly used now.

In modern techniques the treatment is usually administered under light anaesthesia, such as may be used for dental extractions, and the muscular convulsion is reduced by a muscle-relaxant drug. The patient may sometimes be given this treatment as an outpatient. He receives an injection containing the anesthetic and the muscle relaxant, then an electric current of appropriate strength and duration is passed between two electrodes placed on his temples. The procedure takes a few minutes and the patient may be able to walk about after a short period of rest.

Electroplexy is usually given two or three times a week, though in certain circumstances it may be given more frequently. Improvement usually begins after three or four treatments but a course of six to eight is usually necessary.

Electroplexy is used in the treatment of depressive illness, of mania and in schizophrenia. It is most effective in depressive illnesses, 80 per cent of cases making a complete and prompt recovery.

Insulin Coma Therapy

Insulin is a substance, produced in the pancreas, which controls the storage of sugar in the body. It is given by injection in the treatment of diabetes and in psychiatric treatments. One of its effects is to reduce the amount of sugar in the bloodstream and, in large doses, the reduction of blood sugar has the effect of producing coma.

Chance observations that a coma so produced had beneficial effects in cases of schizophrenia led to the use of insulin coma as a treatment for schizophrenia. The subsequent discovery of the tranquilliser drugs and of their efficacy in such illnesses, has reduced the need for insulin coma treatment, but it is still used for some patients.

Producing the Coma. Injections of increasing dosage are given on successive days until a coma is produced. Thereafter a coma is produced each day with the appropriate dosage until between 25 and 30 comas have been produced. Each coma is allowed to continue for half to one and a half hours, and is then interrupted by giving the patient sugar either by injection or by stomach tube.

Since great care is needed in order that the treatment may be given with the minimum of risk, insulin coma therapy is only given in special units under the supervision of specially trained staff. The best results are obtained in early acute cases of the disorder. There is usually a progressive improvement in schizophrenic symptoms and a steady gain in weight during the course of treatment.

Modified Insulin Treatment. Before the discovery of insulin coma treatment for schizophrenia, small doses of insulin given over a short period of time were known to have a sedative effect, to reduce tension, and to increase appetite and weight. Modified insulin therapy is therefore used in cases of psychoneurosis or mild depression where there is considerable tension and, in particular, if there has been weight loss. The treatment usually results in a general improvement in bodily health and in a feeling of well-being.

Prolonged Narcosis

(Sleep Treatment)

During attacks of severe anxiety or depression occurring in the course of a psychiatric illness, a period of continuous sleep is sometimes thought desirable. This can be induced by giving large doses of sedatives, or combinations of sedatives and tranquillisers, to achieve deep sleep for most of the day and night and heavy drowsiness for the remainder. The treatment may last for one or two weeks. It is necessary for the patient to be under close supervision in hospital.

Prolonged narcosis is usually given where the illness is reactive to extremely traumatic or painful circumstances which have become too much for the patient to cope with. It may tide him over the period of acute reaction. When this has been relieved, the patient is able to continue with other forms of treatment.

Brain Surgery in Psychiatry

Frontal Leucotomy (lobotomy) is the most commonly used of operations for the relief of psychiatric illness. Certain nerve fibres from the frontal lobes of the brain are cut, in order to reduce severe anxiety, tension, depression, or the excessive excitability and activity that occurs in some disorders. Various brain functions such as sensation or movement have been located in different part

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MEDINEWS

Simple blood test can now determine foetal abnormalities

In the near future, pregnant women will be able to test for structural, chromosomal and genetic abnormalities in their unborn children through a simple blood test. And this can be done from as early as the first trimester.

This is among several medical breakthroughs the National Healthcare Group's Scientific Congress will showcase next month. With more women having their babies at a later age, the chances of having a baby with genetic, chromosomal or structural defect increase. Women above 35 have a higher chance of having a baby with Down's Syndrome. This can now be detected by a test called an amniocentesis, where a needle is inserted into the womb to extract fluid from the placenta. It is invasive and painful, and carries a minor risk of miscarriage of about 1 to 4 percent.

Research at Singapore's National University Hospital could make this a thing of the past. It has found that a pregnant woman carries her baby's genes in her blood. A simple blood test can determine if abnormalities such as anaemia or lack of blood are present, or even cystic fibrosis - a condition that will cause respiratory problems in baby girls and baby boys. It can also work to detect blood disorders such as Thalassaemia.

Associate Professor Mahesh Choolani, Consultant at the Department of Obstetrics and Gynaecology at the National University Hospital, Singapore said: "I think in Singapore more and more of our mothers are requiring prenatal diagnosis because many of them, about one in five tend to be pregnant after the age of 35 or in the later years. "If we can harness foetal genetic material from the mother's blood, we can do this without having this invasive procedure." Besides genetic diagnosis, doctors say they can also test for the gender of the baby from as early as six weeks. The gender of 23 babies between six and 36 weeks have been successfully found out using just the mother's blood. This could become available to the public in a few years. NUH is just one of three centres in the world doing research in this field.

It is looking even further into cell therapy in the womb - where babies can be injected with stem cells before they are born to treat certain kinds of abnormalities. Tan Tock Seng Hospital will also present its findings of a recent cancer research, which found that older women wait until the very late stage of cancer before seeing the doctor. The survey also found that Malay women are also two times likely to present cancers in the advanced stage as compared to the other groups.

Dr Patrick Chan, Consultant at Breast Unit of Tan Tock Seng Hospital/ said: "If the Malay woman is presenting at a later stage because of a lack of awareness in seeking treatment, we feel that we need to reach out to these group of women. We must increase public education especially to target the Malay women.

"I think this year's breast cancer awareness month committee initiated a public

forum in Malay and the answer is obvious - that we are trying to reach out to them, to tell these women that breast cancer is a very treatable condition - that if they can come in when their breast symptoms occurs, they come in quickly and seek prompt medication action/ they can get good medical treatment."

It is estimated that Singapore women have a one-in-16 lifetime risk of developing breast cancer. While it is not known why the incidence of breast cancer is so high here, one theory is that it has something to do with lifestyle and diet.

These are just some of the 450 scientific papers that will be presented during the two-day Congress. It is hoped that by sharing information, this will help the healthcare community to target areas that they need to work on, for the health benefit of the whole population. - CNA.

Bacterial Bad Behaviour

Beats Infection

Spiteful fight-to-the-death tactics used by rival bacterial parasites in the desperate search for nourishment can help to reduce the harmfulness of disease symptoms, new research from the universities of Edinburgh and Bath has shown. A study published in the Proceedings of the Royal Society reveals that bacteria are too busy killing each other to cause severe disease in the organisms that host the parasites.

The lives of bacterial parasites can be extremely vicious. In their aggressive competition for limited resources, bacteria may try to poison each other. Some bacterial cells even unleash the ultimate offensive - they self-destruct, showering lethal toxins over their competitors. The new research into this microscopic battleground has shed light on the motivation for such behaviour. Such vicious behaviours that harm both the perpetrator and any victims present an interesting evolutionary puzzle.

Researcher Andy Gardner, of the University of Edinburgh's Institute of Cell, Animal & Population Biology, explained: "At first it is not easy to see how spite can evolve, because the suicidal bacterium will leave no descendants to carry its genes into future generations. But it can be favoured because the bacterium's kin, which also carry copies of its genes, are immune to the toxins. By killing their competitors, the suicidal act indirectly benefits these kin, and they transmit the genes to future generations.

"We found that this strategy is beneficial when the bacteria are engaged in competition with their neighbours, and when they interact with a mixture of kin and unrelated individuals, as this means there are both victims to target the toxins against and relatives to enjoy the freed-up resources. The elimination of competitors also has an unexpected benefit for the host as the reduction in bacterial growth reduces the severity of disease symptoms."

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PHARMANEWS

Prescribing Notes

Antipsychotic drugs are used mainly in schizophrenia to control the acute symptoms, to prevent relapses and, less effectively, to ameliorate chronic schizophrenic symptoms. They are also used to combat the symptoms of mania such as exhausting overactivity, euphoria, garrulousness and delusions of grandeur and to help in the management of organic syndromes such as brain damage and dementia. The antipsychotic action of these drugs may be attributable to anti-dopaminergic activity in the limbic system. Blockade of this transmitter in other brain areas is also responsible for the adverse effects of extrapyramidal reactions and hyperprolactinaemia. Antipsychotics interact to varying degrees with a wide range of other neuroreceptors in the CNS. The degree of interaction may be responsible for many of the different adverse effects associated with these agents (see below).

Phenothiazines can be divided into 3 groups:

- I. Aliphatic compounds (characterised by pronounced sedative effects and moderate extrapyramidal and autonomic effects).
- II. Piperidines (characterised by moderate sedative effects, fewer extrapyramidal but more autonomic effects).
- III. Piperazines (characterised by fewer sedative effects, pronounced extrapyramidal but less autonomic effects).

Other Classes of antipsychotics include the thioxanthenes and butyrophenones whose action resembles the piperazine phenothiazines, and the substituted benzamides which may be less sedative and may have a reduced incidence of tardive dyskinesia. This may be related to a slightly different profile of dopamine blocking activity seen with these drugs.

The tricyclic dibenzoxazepine, loxapine is pharmacologically similar to phenothiazines, butyrophenones and thioxanthenes, but is thought to have a lower incidence of extrapyramidal side effects. The exact mechanism of action is unknown but it may act by reducing the firing thresholds of CNS neurons acting in polysynaptic pathways.

Atypical Antipsychotics

The dibenzodiazepine, clozapine has serotonergic, alpha adrenergic and histaminergic blocking activity with a minimal central antidopaminergic activity, and hence has a low potential for producing extrapyramidal effects. Clozapine has been shown to be effective in relieving both positive and negative schizophrenic symptoms in patients refractory to classical antipsychotics. Patients should be carefully monitored due to the risk of agranulocytosis.

The phenylindole sertindole produces an improvement in both the positive and negative symptoms of schizophrenia. It has a greater effect in the limbic system than the substantia nigra and is therefore less likely to produce extrapyramidal side effects than classical antipsychotics.

The benzisoxazole derivative, risperidone has antagonist activity at both serotonergic (5HT₂) and dopaminergic (D₂) receptors, and produces fewer extrapyramidal side effects than classical antipsychotics. It has also been shown to be effective against both the positive and negative symptoms of schizophrenia.

The thienobenzodiazepine, olanzapine, has potent antagonist activity at 5HT₂ D₁ D₂, H₁ and alpha receptors, as well as antimuscarinic activity. It improves the positive and negative symptoms and affective component of schizophrenia, but has a low potential to cause extrapyramidal effects.

Note : Antipsychotics

Drugs Interactions : CNS depressants, alcohol analgesics, anti hypertensives, antidepressants, anticonvulsants, antidiabetics, levodopa.

Adverse Drug Reaction : Acute dystonias (spasms of eye, face, neck and back muscles), akathisia (motor restlessness), parkinsonism-like syndrome (rigidity and tremor), and tardive dyskinesia, dry mouth, nasal stuffiness, difficulty in micturition, tachycardia, constipation, blurring of vision, hypotension, weight gain, impotence, galactorrhoea, hypothermia (a problem in the elderly), gynaecomastia, amenorrhoea, benign obstructive jaundice, blood dyscrasias and dermatitis, ECG irregularities, drowsiness, lethargy, fatigue, epileptiform seizures.

Butyrophenone

Butyrophenone. .25mg white tablet

Indications : Control of deviant and anti-social sexual behaviour.

Adults : 0.25-1.5 mg in divided doses.

Children : Not recommended.

Contraindications : Pyramidal or extrapyramidal symptoms.

Special Precautions : Pregnancy, lactation. Regular blood counts and liver function tests during prolonged therapy.

Thioxanthene

Thioxanthene. Zuclopenthixol hydrochlor. 2 mg pink; 10 mg light brown; 25 mg brown

Indications : Psychoses, especially schizophrenia.

Adults : Initially 20-30 mg daily in divided doses. Maintenance 20-50 mg daily; max. 150 mg daily.

Children : Not recommended.

Also Injection Depot thioxanthene. Zuclopenthixol decanoate 200 mg/ml oily

inj.; amps. 10 x 1 ml, 232-25.

Adults : Usually 200-400 mg by deep; i.m. injection. every two to four weeks; maximum., 600 mg a week.

Children : Not recommended.

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